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PROFESSIONAL EXPERIENCE

1980 - Present Oceanographer
NOAA/ NESDIS Office of Research and Applications (ORA)

Conduct and participate in NESDIS satellite remote sensing ocean research studies in-house, within NOAA, and in collaboration with other national and international agencies.

1995 - Present Research Associate
College of Marine Studies, University of Delaware

Conduct oceanography research as part of the Ocean Remote Sensing Group in support of state and federally funded coastal programs.

EDUCATION

1995 - 2001 University of Delaware, Newark, DE
Ph.D. – Marine Studies

1982 - 1983 University of Maryland, College Park, MD
Graduate Studies - Marine and Estuarine Environmental Studies Program

1978 - 1980 Texas A & M University, College Station, TX
M.S. - Oceanography

1974 - 1977 University of Puerto Rico at Mayagüez, Mayagüez, PR
B.S. - Physics

PROFESSIONAL ACTIVITIES AND AFFILIATIONS

NASA NRA Physical Oceanography Panel Reviewer (2002), IGARSS2002 SAR Wind and Waves Invited Session Co-Chair (2002), NASA Tropical Center for Earth and Space Studies (TCESS) Advisory Committee Member (2000-Present), Instituto Canario de Ciencias Marinas (ICCM) Research Associate (2000-Present), ORA liaison to the EUMETSAT Oceans and Ice Satellite Applications Facility (O&ISAF), CEOS Subcommittee on Natural Disaster Reduction (SNDR) Remote Sensing Applications Working Group (RSAWG) Member (2000-Present), CEOS SAR CAL/VAL Users Working Group NESDIS/ORA Alternate (2000-Present), SAR Information Users Working Group (SIUWG) Operational Agencies Alternate (2000-Present), Venice2000 Oceans From Space SAR Sessions Chair (2000), NOAA Bronze Medal Recipient (1999), NOAA Spanish Media Contact (1998 - Present), NESDIS Strategic Plan Outreach and Customer Awareness Team Member(1999-Present), NOAA Graduate Scientist Program Advisor (1999-Present), CEOS Disaster Management Support Project Oil Spill Team Member(1998-2002), WMO Committee on Marine Meteorology Oceanographic Satellite and Other Remote Sensing Sub-Group Member (1997 - Present), NESDIS Satellite Products and Services Review Board Chair (1997-1998), NESDIS Diversity Council (1995 - Present), University of Delaware College of Marine Studies Research Associate (1995-Present).

Institute of Electrical and Electronics Engineers (IEEE), IEEE Geoscience and Remote Sensing Society (GRSS),

American Geophysical Union (AGU), American Association for the Advancement of Science (AAAS), Alliance for Marine Remote Sensing (AMRS), American Fisheries Society (AFS), Northwest Aquatic and Marine Educators Association (NWAMEA), Association for Puerto Ricans in Science and Engineering (APRSE), Society of Hispanic Professional Engineers (SHPE), Society of Latin American Remote Sensing Specialists (SELPERS), Society for the Advancement of Chicanos and Native Americans in Science (SACNAS), Society of Mexican Americans in Engineering and Science (MAES), Commerce Latino Employee Association (CLEO), Chinese-American Oceanographic and Atmospheric Association (COAA).

RECENT PUBLICATIONS

Wackerman, C.C., **P. Clemente-Colón**, W.G. Pichel, and X. Li, An Analytical Two-Scale Model To Predict C-VV and C-HH Radar Cross Section Values, *Canadian Journal of Remote Sensing*, 28(3), 367-384, June 2002.

Li, X., T.F. Donato, Q. Zheng, W.G. Pichel, and **P. Clemente-Colón**, 2002, An extraordinary breach of the Gulf Stream north wall by a cold water intrusion, *Geophys. Res. Lett.*, 29(15), 10.1029/2002GL015378.

Clemente-Colón, P., W.G. Pichel, F.M. Monaldo, D.R. Thompson, and C.C. Wackerman' 2002, Development of SAR-Derived Ocean Surface Winds at NOAA/NESDIS, *Proceedings EUMETSAT Satellite Meteorological Conference*, Dublin, Ireland, 2-6 September, 2002.

Clemente-Colón, P., 2002, Observation of atmospheric boundary layer and turbulence activity over the ocean surface using synthetic aperture radar, *Proceedings AMS 15th Boundary Layer and Turbulence Conference*, Wageningen, The Netherlands, 15-19 July 2002. 4 p.

Pichel, W.G., **P. Clemente-Colón**, K. Friedman, X. Li, F. Monaldo, C. Wackerman, R. Beal, and W. Tseng, 2002, NOAA CoastWatch RADARSAT-1 SAR Coastal Monitoring Applications Demonstrations, *Proceedings IGARSS 2002*, 3 pp.

Li, X., **P. Clemente-Colón**, W. Pichel, K. Friedman, 2002, SAR and MODIS images of Atmospheric Solitons Generated by Upstream Blocking in Flow over St. Lawrence Island Bering Sea, *Proceedings IGARSS 2002*, 3 pp

Friedman K., W. Pichel, **P. Clemente-Colón**, and X. Li, 2002, GoMex – An Investigative GIS System for the Gulf of Mexico Region using SAR and Ancillary Data, *Proceedings IGARSS 2002*, 3 pp.

Wackerman, C., **P. Clemente-Colón**, W. Pichel, 2002, A Two-Scale Mode to Predict C-VV and C-HH RCS Values over the Ocean, *Proceedings IGARSS 2002*, 3 pp.

Clemente-Colón, P., D.A. Gagliardini, R.V. Legeckis, and W.G. Pichel, 2002: Spaceborne Synthetic Aperture Radar and Thermal Observations of the Brazil-Malvinas (Falkland) Confluence Zone, *Proceedings 29th International Symposium on Remote Sensing of the Environment*, 8-12 April, 2002, Buenos Aires, Argentina, 3 pp.

Li, X., **P. Clemente-Colón**, W. Pichel, P. Vachon, and K. Freidman: 2002, Imaging the sea surface imprints of atmospheric vortex streets by space-borne synthetic aperture radar, *Proceedings AMS 6th Symposium on Integrated Observing Systems*, 14-17 January, 2002, Orlando, Florida.

Friedman, K.S., W.G. Pichel, **P. Clemente-Colón**, and X. Li: 2002, Integrating multiple sensors to study algal blooms in the eastern Gulf of Mexico, *Proceedings AMS 6th Symposium on Integrated Observing Systems*, 14-17 January, 2002, Orlando, Florida.

Clemente-Colón, P., 2002, The use of Spaceborne Synthetic Aperture Radar in the Monitoring and Management of Bering Sea Fisheries, in *Scientific and Operational Applications of Remote Sensing for Coastal and Marine Fisheries*, Morales J. and D. Blackburn (Eds.). UNESCO CSI Info Paper 14, 2002.

Simecek-Beatty, D. and **P. Clemente-Colón**, 2002, RADARSAT-1 synthetic aperture radar analysis for oiled birds off San Francisco, California, *Office of Response and Restoration Report 2002-1*, May 2002, 31 pp.

Gagliardini, D.A., **P. Clemente-Colón**, J. Bava, J.A. Milovich and L.A. Frulla, Complementary Use of SAR and Thermal IR Observations in the Brazil-Malvinas Confluence Region, *CJRS*, 27(6), December 2001.

Clemente-Colón, P., Coastal Oceanography Applications of Spaceborne Synthetic Aperture Radar (SAR) in the Middle Atlantic Bight (MAB), *A Dissertation for the degree of Philosophy Doctorate*, College of Marine Studies, University of Delaware, Newark, Fall 2001, 233p.

Monaldo, F.M., D.R. Thompson ,R.C. Beal, W.G. Pichel, and **P. Clemente-Colón**, 2001, Comparison of SAR-derived wind speed with model predictions and ocean buoy measurements, *IEEE TGARS*, 39(12), 2,587-2,600.

Thompson, D., F. Monaldo, R. Beal, N. Winstead, W. Pichel, and **P. Clemente-Colón**, 2001, Using combined SAR and scatterometer estimates for improved high-resolution coastal wind mapping, *EOS*, October 9.

Li, X, W. Pichel, **P. Clemente-Colón**, V. Krasnopolsky, and J. Sapper, 2001, Validation of coastal sea and lake

surface temperature measurements derived from NOAA/AVHRR Data, *Int. J. Remote Sens.* 22(7), 1285-1303.

Li, X., W. G. Pichel, E. Maturi, **P. Clemente-Colón**, and J. Sapper, 2001, Deriving the operational nonlinear multi-channel sea surface temperature algorithm coefficients for NOAA-15 AVHRR/3, *Int. J. Remote Sens.*, 22(4), 699-704.

Li, X., Q. Zheng, W. G. Pichel, X.-H. Yan, W. T. Liu, and **P. Clemente-Colón**, 2001, Analysis of coastal lee waves along the coast of Texas observed on AVHRR images, *J. Geophys. Res.*, 106(C4), 7017-7025.

Friedman, K. S., T. Sikora, W. G. Pichel, and **P. Clemente-Colón**, 2001, Using Spaceborne Synthetic Aperture Radar to Forecast Polar Mesoscale Cyclones in the Bering Sea, *Weather and Forecasting*, 16(2), 270-276

Wackerman, C.C., K.S. Friedman, W.G. Pichel, **P. Clemente-Colón**, and X. Li, 2001, Automatic detection of ships in RADARSAT-1 SAR imagery, *Canadian Journal of Remote Sensing*, 27 (4), 371-378.

Vachon, P. W., P. Black, P. Dodge, K. Katsaros, **P. Clemente-Colón**, W. G. Pichel, and K. MacDonell: 2001, RADARSAT-1 SAR for Hurricane Watch, *Proceedings of the 23rd Canadian Symposium on Remote Sensing*, Sainte-Foy, Québec, August 20 – 24, Canadian Aeronautics and Space Institute, pp 131-136.

Clemente-Colón, P., 2001, Evolution of upwelling-associated biological features in the Middle Atlantic Bight as captured by SAR, SST, and ocean color sensors, *Proceedings of the International Geoscience and Remote Sensing Symposium 2001 (IGARSS 2001)*, Sydney July 9-13, 3 pp.

Friedman, K. S., C. Wackerman, F. Funk, W. Pichel, **P. Clemente-Colón**, and X. Li, 2001, Validation of a CFAR vessel detection algorithm using known vessel locations, *Proceedings of the International Geoscience and Remote Sensing Symposium 2001 (IGARSS 2001)*, Sydney, July 9-13, 3 pp.

Li, X., M. He, K. Zeng, L. Wang, C. Zhao, W. Pichel, K. Friedman, and **P. Clemente-Colón**, 2001, Analysis of oceanic long wave refraction at the Gulf Stream boundary using RADARSAT Synthetic Aperture Radar during Hurricane Bonnie, *Proceedings of the International Geoscience and Remote Sensing Symposium 2001 (IGARSS 2001)*, Sydney, July 9-13, 3 pp.

Monaldo, F., D. Thompson, W. Pichel, and **P. Clemente-Colón**, 2001, Comparison of RADARSAT SAR-Derived Wind Speeds with Buoy and QuikSCAT Measurements, *Proceedings of the International Geoscience and Remote Sensing Symposium 2001 (IGARSS 2001)*, Sydney, July 9-13, 3 pp.

Vachon, P., P. Black, P. Dodge, Kristina Katsaros, **P. Clemente Colón**, W. Pichel, and K. MacDonell, 2001, RADARSAT-1 Hurricane Watch, *Proceedings of the International Geoscience and Remote Sensing Symposium 2001 (IGARSS 2001)*, Sydney, July 9-13, 3 pp.

Clemente-Colón, P., Q. Zheng, and X.-H. Yan, 2001, Sea surface temperature effects on SAR backscatter, *11th Conference on the Interaction of the Sea and Atmosphere*, 14—18 May 2001, San Diego, California, pp. 55-58.

Pichel, W.G. and **P. Clemente-Colón**, 2001, Development and demonstration of coastal and hydrologic applications of ALOS PALSAR imagery for NOAA CoastWatch, *Proceedings of 1st ALOS PI Workshop*, March 26-30, 2001, Tokyo, pp 396-398.